



# Children

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Provided by the Wisconsin Information for State Health Policy Program, a program funded by the Division of Health and the Robert Wood Johnson Foundation.

Comments and suggestions on improving the profiles may be addressed to:

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## FOREWORD

*Community Health Profiles: Children* is the second in a series of three subject-specific profiles. These profiles were developed to provide information for the improved coordination of public and private sector efforts to reduce acute care needs by increasing prevention and primary care services and outreach. The first profile in the series is about pregnant women and infants; the third is about people with chronic conditions.

The profiles evolved from a series of discussions, begun in 1992, between decision-makers in Wisconsin who met to identify key health policy issues for which information was needed. Participants identified primary care and prevention as key mechanisms for reducing health care costs. The Wisconsin Information for State Health Policy Program (InfoSHPP), which seeks to improve the availability and usefulness of health information for policy-makers in the state, was an outgrowth of those discussions.

During the early phases of InfoSHPP, local communities were recognized as the primary arenas for implementing effective change to improve the health of children. In response, the profiles were developed to address the need for local information in a user-friendly format. Profiles have been developed for each Wisconsin county, for each of Wisconsin's five largest cities (Kenosha, Madison, Milwaukee, Racine, and Green Bay), for a selected group of zip codes in the city of Milwaukee, for the five Division of Health regions, and for the state as a whole.

*Community Health Profiles: Children* makes a special contribution to local health information by providing:

- a focus on the specific topic of children's health;
- information from a variety of data sources, including both population-based and program participant information;
- a narrative highlighting related *statewide* information for each table and graph;
- comparable statewide, regional and local information (statewide and regional information is shown, even when numbers are too small to present for local areas);
- a ranking system for selected measures of health so that community comparisons can be made.

A companion report, *Children's Health in Wisconsin: Statewide Estimates*, focuses on statewide information. This report incorporates an extensive narrative and provides information about children's health that is not available for local areas, including variations in estimates by children's age, socioeconomic factors and health care coverage.

Many people contributed their time and ideas through a collaborative planning process to produce these profiles. Special acknowledgment goes to the members of the children's health information work group formed in connection with the Information for State Health Policy Program, which helped to define the content and format of the profiles; to the Bureau of Health Care Financing, which provided Medicaid data; to the Bureau of Public Health, for providing

blood lead information and WIC (Special Supplemental Nutrition Program for Women, Infants and Children) data; to the Division of Community Services, for Birth to Three data and information on child abuse and neglect; and to the Office of Health Care Information, for data tapes of hospital inpatient discharges and health care provider surveys.

The profiles were prepared in the Center for Health Statistics. Yvonne Brandreth had primary responsibility for the design and production of the profiles. Angela Bethel “desk-top published” the profiles, including importing the data into the tables and graphics. Patricia Nametz helped define the content of the profiles and wrote the statewide companion report. Patricia Guhleman, InfoSHPP Program Coordinator, provided consultation in all phases of production.

The following individuals provided data and expertise: Robert Adler for data from U.S. Census and Wisconsin death certificate files; Eleanor Cautley and Fred Krantz for data from the Family Health Survey; Laura Owens for data from the preventable hospitalization file, the hospital inpatient tapes, and physician survey; Bernie Tennis for data from the surveys of other health care professionals; Eileen McRae and Dan Spencer for Medicaid data; and Linda Spaans-Esten and Glenn Thompson for WIC data.

Your comments and suggestions on improving the profiles are appreciated. Please direct them to Patricia Guhleman (608-257-5221 or [guhlepa@dhfs.state.wi.us](mailto:guhlepa@dhfs.state.wi.us)) at the Center for Health Statistics. On the Internet, go to: **<http://www.dhfs.state.wi.us/>** for instructions about accessing the *Profiles*.

Requests for *Children's Health in Wisconsin: Statewide Estimates* should be addressed to:

Center for Health Statistics  
Division of Health  
Department of Health and Family Services  
P.O. Box 309, Room 172  
Madison WI 53701-0309

## DEMOGRAPHICS

**Table 1. Number of Children Ages 0-17, 1990 and 1994**

Age Group	1990 Census	1994 Estimate	Percent Change	1994 Males	1994 Females
<1	230	190	-17%	100	90
1-4	970	900	-7%	460	440
5-14	2,890	2,570	-11%	1,310	1,260
15-17	770	850	10%	400	450
<b>Total 0-17</b>	<b>4,860</b>	<b>4,510</b>	<b>-7%</b>	<b>2,270</b>	<b>2,240</b>

Source: 1990 data are from the 1990 Census of Population and Housing, Modified Age-Race-Sex (MARS) file. 1994 estimates are from the Wisconsin Center for Health Statistics.

Note: The focus of this profile is children ages 1-14. Because some data sources do not permit an isolation of this age group, the numbers of children less than one year old and ages 15-17 are presented here for background information. Numbers have been rounded to the nearest 10.

*From 1990 to 1994, the number of preschool-aged children in Wisconsin decreased, while the number of school-aged children increased.*

**Table 2. Living Arrangements of Children Ages 0-17, 1990**

Age Group	Parental Household	Other Relative's Household	Non- Relative's Household	Other	Total
0-4	94.7%	4.4%	0.9%	0.0%	100%
5-14	97.4	1.2	1.4	0.0	100
15-17	95.6	2.5	2.0	0.0	100
<b>Total 0-17</b>	<b>96.4</b>	<b>2.2</b>	<b>1.4</b>	<b>0.0</b>	<b>100%</b>

Source: 1990 Census of Population and Housing, Summary Tape File 1.

Note: This table includes all children under 18 years of age. Children's living arrangements are identified according to their relationship to the household head (householder). The "other" category includes children living in group homes or institutions.

"Other relative's household" and "non-relative's household" may include a child's parent. For example, the householder could be a grandparent in a three-generation home, or a friend of the parent who lives in the household

*Statewide, children under five years of age are more likely than older children to be living in a household headed by someone other than their parent(s).*

**Table 3. Percent of Children Ages 0-17 in Selected Poverty Categories, 1989**

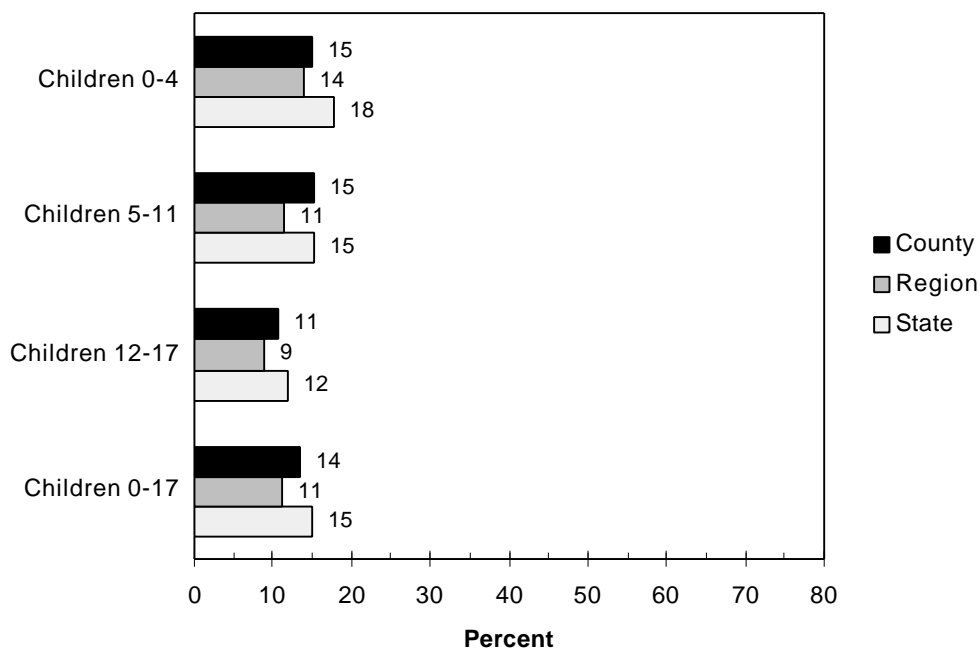
Age	<100%	100-149%	150-174%	175-184%	185+%	Total
0-4	15%	11%	9%	1%	64%	100%
5-11	15	14	8	3	60	100
12-17	11	12	5	2	70	100
<b>Total 0-17</b>	<b>14</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>64</b>	<b>100%</b>

Source: 1990 Census of Population and Housing, Summary Tape File 4.

Note: Poverty status is based on 1989 family income reported in the 1990 Census. (See Technical Notes.)

The first column reflects the percent of children officially “in poverty,” that is, below 100 percent of the poverty level (\$12,674 for a family of four in 1989). Children in families with incomes of 100 to 149 percent of the poverty level are in the second column, and so on.

*About 15 percent of Wisconsin children ages 0-17 lived in households with income below poverty, based on 1989 household income reported to the U.S. Census.*

**Figure 1. Percent of Children Ages 0-17 in Poverty, 1989**

*The proportion of Wisconsin children in poverty was higher among the youngest children, ages 0-4 (18 percent), and children ages 5-11 (15 percent) than among older children, ages 12-17 (12 percent).*

Source: 1990 Census of Population and Housing, Summary Tape File 4a.

Note: “In poverty” means that 1989 household income was less than 100 percent of the federal poverty guidelines. (See Technical Notes for more detail.)

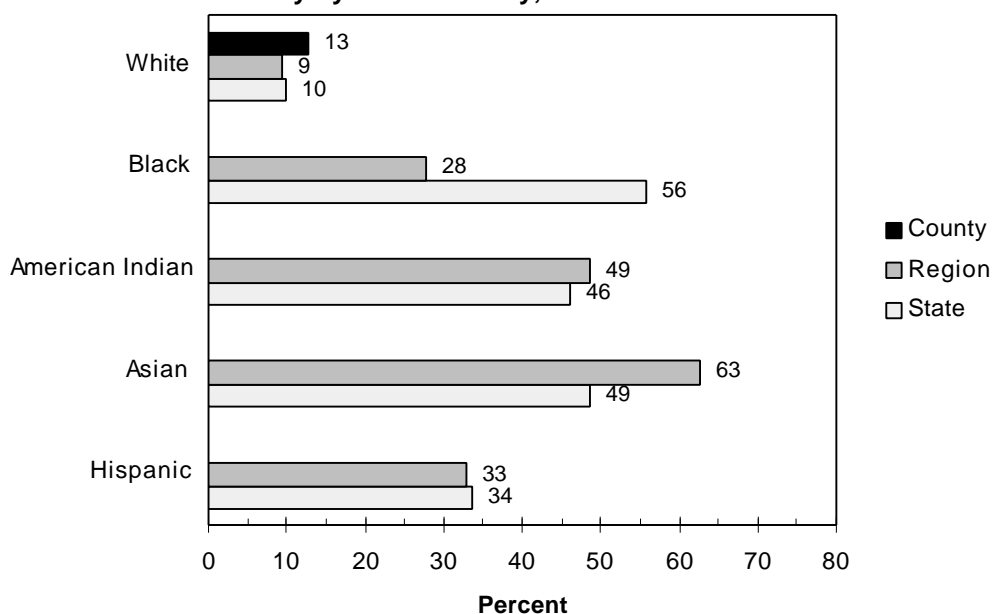
**Table 4. Number of Children Ages 0-17 by Race/Ethnicity, 1990**

Age Group	White	Black	American Indian	Asian	Hispanic
<1	210	0	0	10	10
1-4	930	0	0	20	10
5-14	2,800	0	10	30	50
15-17	760	0	0	0	10
<b>Total 0-17</b>	<b>4,700</b>	<b>0</b>	<b>10</b>	<b>60</b>	<b>80</b>

Source: 1990 Census, Modified Age-Race-Sex (MARS) file.

Note: Race/ethnic categories in this table are mutually exclusive: non-Hispanic white, non-Hispanic black, non-Hispanic American Indian, non-Hispanic Asian, and Hispanic. Numbers have been rounded to the nearest 10.

Statewide, about 174,000 children under age 18 were either Hispanic or belonged to a racial minority group.

**Figure 2. Percent of Children Ages 0-17 in Poverty by Race/Ethnicity, 1989**

Statewide in 1989, the proportions of children who lived in households with income below the poverty level were: 10 percent of white children, 56 percent of black children, 46 percent of American Indian children, 49 percent of Asian children, and 34 percent of Hispanic children.

Source: 1990 Census of Population and Housing, Summary Tape File 4.

Note: Unlike the data in Table 4, race/ethnic categories in this figure are not mutually exclusive. Hispanics thus appear both in the race categories and separately in the Hispanic category. (Hispanics may be of any race.)

“In poverty” means that 1989 household income was less than 100 percent of the federal poverty guidelines. (See Technical Notes for more detail.)

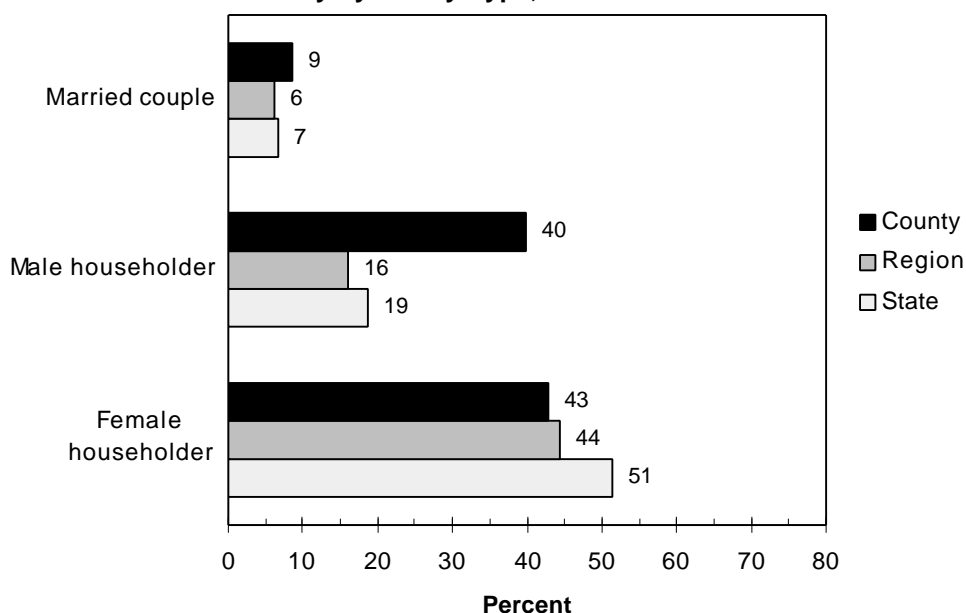
**Table 5. Living Arrangements of Children Ages 0-17 in Parental Households, 1990**

Age Groups	Parent Householder, Spouse Present	Father Householder, No Wife Present	Mother Householder, No Husband Present	All Non-Parental Households	Total
0-4	83%	3%	9%	5%	100%
5-14	84	3	10	3	100
15-17	82	4	10	4	100
<b>Total 0-17</b>	<b>83</b>	<b>3</b>	<b>10</b>	<b>4</b>	<b>100%</b>

Source: 1990 Census of Population and Housing, Summary Tape File 3.

Note: This table provides more detail about children living in parental households than is shown in Table 2. The Census classifies children living with a parent who is not the householder as living in a "non-parental household."

*Statewide in 1990, about 77 percent of children lived in a married-couple household headed by a parent.*

**Figure 3. Percent of Children Ages 0-17 in Poverty by Family Type, 1989**

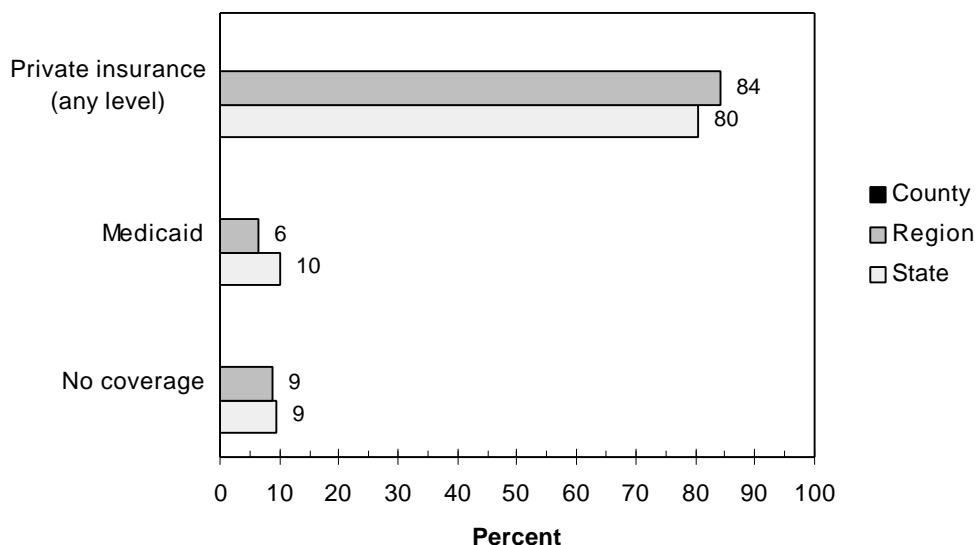
*Children living in families with a female householder (no spouse present) experienced higher poverty rates than other children.*

Source: 1990 Census of Population and Housing, Summary Tape File 3a.

Note: The Census data from which this figure was derived differ somewhat from Table 5. This figure includes all children related to the household head, whether parent or other relative.



**Figure 4. Type of Health Care Coverage for Children Ages 1-14**

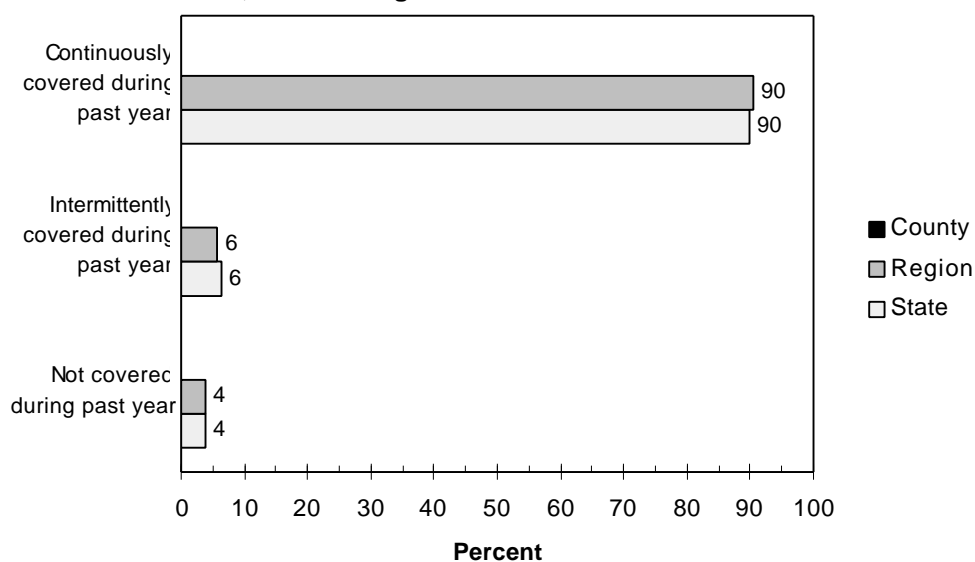


*Most Wisconsin children ages 1-14 had some type of private health care coverage.*

Source: Family Health Survey, 1990-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown. (See Technical Notes for comparison of Family Health Survey and Medicaid Program enrollment data.)

**Figure 5. Health Care Coverage Over Past Year, Children Ages 1-14**

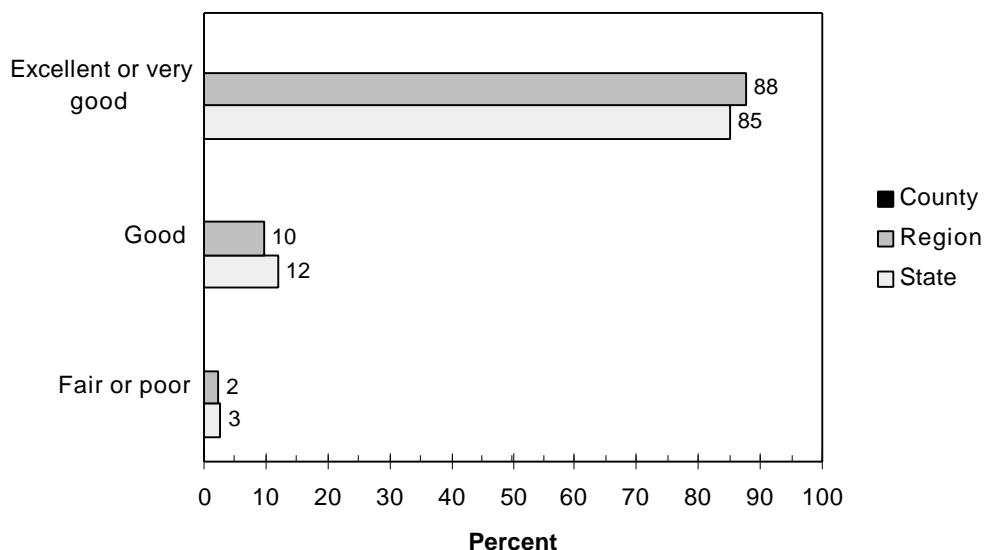


*Statewide, about 6 percent of children ages 1-14 had interruptions in their health care coverage during the past year, while 4 percent had no coverage for the entire year.*

Source: Family Health Survey, 1993-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown.

**Figure 6. Health Status of Wisconsin Children  
Ages 1-14**



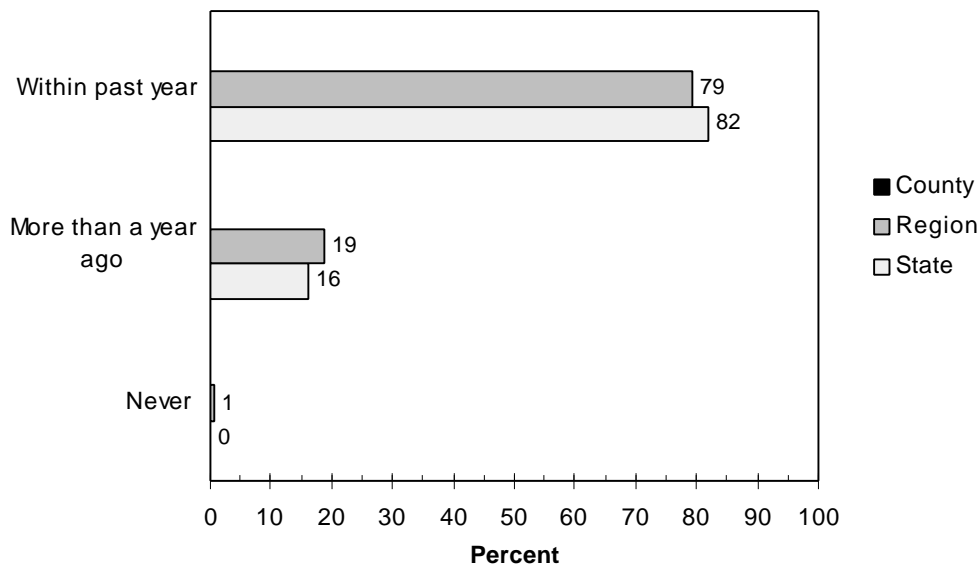
*An overwhelming majority of Wisconsin children (97 percent) were reported to have good to excellent health.*

Source: Family Health Survey, 1990-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown.

## HEALTH SERVICES

**Figure 7. Most Recent Visit to a Doctor,  
Children Ages 1-14**

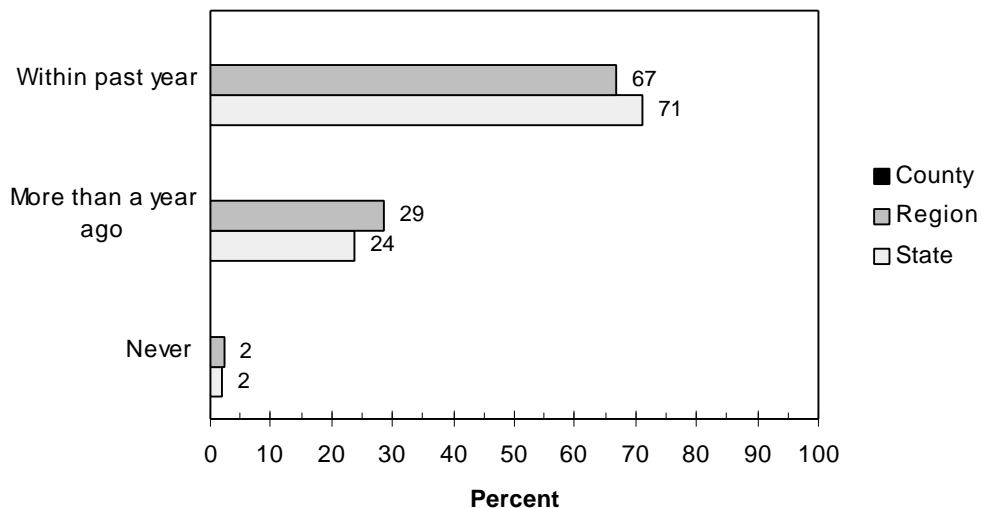


*Most (82 percent) Wisconsin children ages 1-14 visited a doctor for either preventive or acute care during the past year.*

Source: Family Health Survey, 1990-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown.

**Figure 8. Most Recent General Physical Examination, Children 1-14**

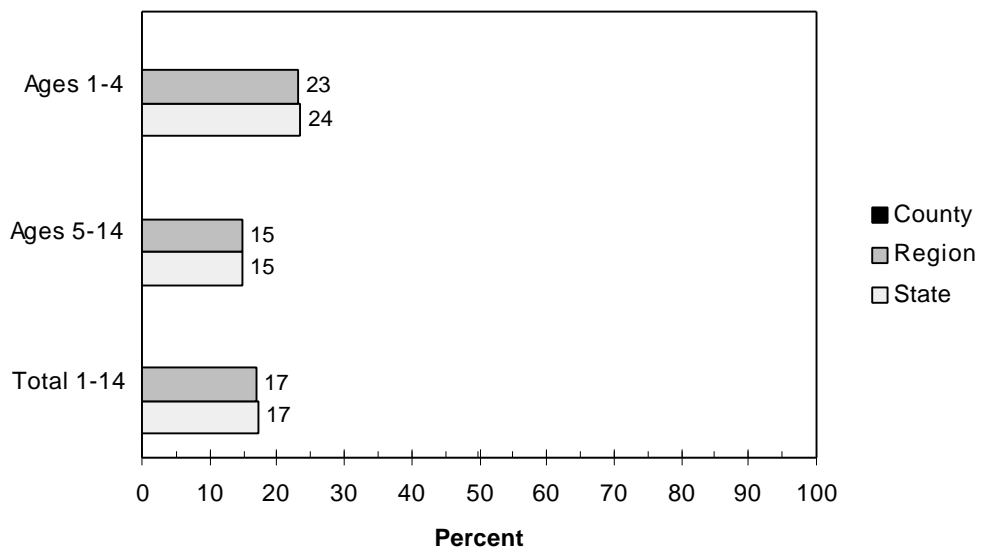


*Statewide, about 70 percent of children ages 1-14 received a general physical examination within the past year, an indicator of preventive health care.*

Source: Family Health Survey, 1990-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown.

**Figure 9. Treated in Hospital Emergency Room During Past Year, Ages 1-14**

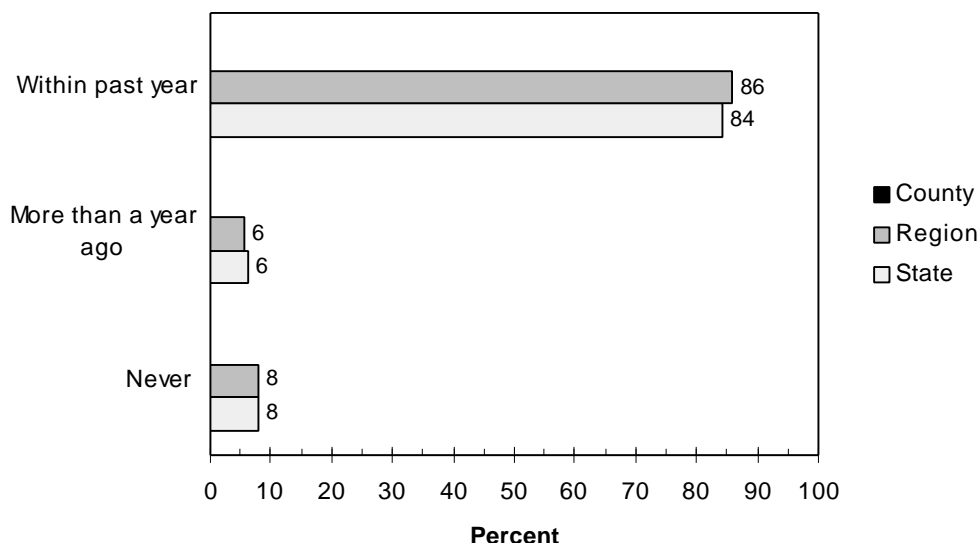


*Seventeen percent of all Wisconsin children ages 1-14 were treated in an emergency room in the past year.*

Source: Family Health Survey, 1990-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown.

**Figure 10. Most Recent Visit to a Dentist,  
Children Ages 3-14**

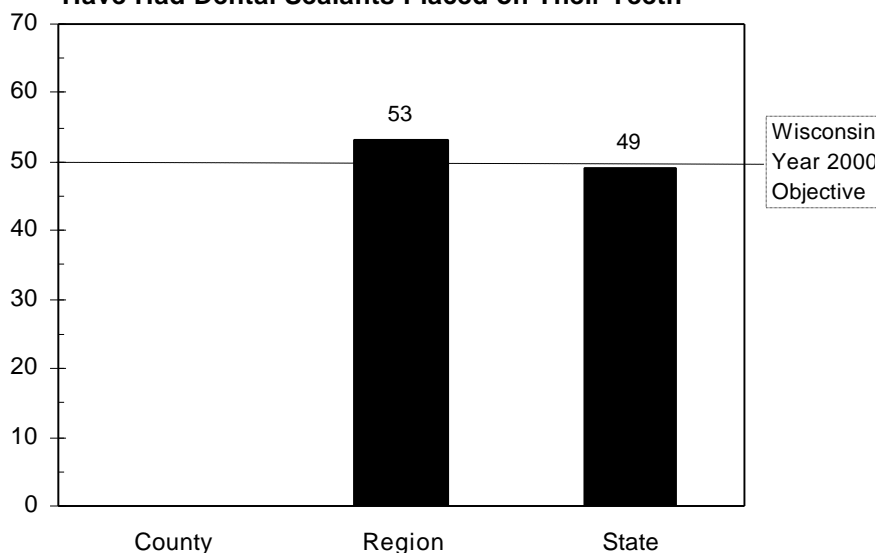


*Statewide, more than 80 percent of children ages 3-14 saw a dentist within the past year; about 8 percent have never visited a dentist.*

Source: Family Health Survey, 1990-94 combined data, Center for Health Statistics.

Note: County estimates based on <200 interviews are not shown. Responses may not total 100 percent due to rounding and/or because nonresponse categories are not shown.

**Figure 11. Percent of Children Ages 8-14 Who  
Have Had Dental Sealants Placed on Their Teeth**



*Statewide, an estimated 49 percent of children ages 8-14 had dental sealants placed on their teeth. This percent almost meets the Wisconsin Year 2000 objective of 50 percent.*

Source: 1994 Family Health Survey, Center for Health Statistics.

Note: With the exception of the Southeastern Region, the estimated percent of children with dental sealants in each region is based on a small sample size (see Technical Notes). The possible error in estimation is larger when the sample size is small.

**Table 6. Primary Care Physicians Who Provide Pediatric Care, 1993**

Specialty	Provide Pediatric Care	Serve Medicaid Patients
<b>Total Primary Care</b>	<b>8</b>	<b>100%</b>
Family Practice	4	100
Pediatrics	0	0
Internal Medicine	1	100
General Practice	3	100
Obstetrics/Gyn.	0	0
<b>Psychiatry/Child Psych.</b>	<b>0</b>	<b>0</b>

Source: 1993 Physician Profile Survey, Office of Health Care Information; tape edited by Wisconsin Primary Health Care Association.

Note: Physicians were included if they indicated that they provide care in this profile's geographical area. Physicians who provide care in more than one area are included in the profiles for both areas. Psychiatrists are not included in the total primary care count.

The final column of this table indicates the percent of physicians providing pediatric care who reported they serve Medicaid patients.

*Statewide in 1993, about 2,000 physicians practicing primary care specialties reported that they provide pediatric care. Most of these physicians reported their practice specialty as Family Practice (1,144) or Pediatrics (507).*

**Table 7. Other Health Care Professionals Who May Provide Pediatric Care, 1993**

Provider Type	Provide Pediatric Care	Serve Medicaid Patients
Dentists	10	70%
Advanced Practice Nurses	4	50
Physician Assistants	0	0

Source: Dentist Profile Survey, Advanced Practice Nurse Profile Survey, Physician Assistant Profile Survey, Office of Health Care Information.

Note: **Dentists** were included if they reported any hours per week spent in patient care, and they reported their primary practice as general practice, public health or pediatric dentistry.

**Advanced Practice Nurses** were included if they reported any hours per week spent in clinical care, and they reported their primary clinical practice focus as general practice, family health, pediatrics, or primary care or they answered "yes" to the question "Do you provide pediatric care?"

**Physician Assistants** were included if they reported any hours per week spent in patient care, and they reported the services they provide as family/general practice, pediatrics/general, pediatrics/subspecialty, or public health/prevention.

*Statewide, about half of all dentists reported that they serve Medicaid patients.*

**Table 8. Number of “Preventable” Hospitalizations by Selected Diagnoses, Children Ages 1-14, 1994**

Diagnosis at Discharge	Ages 1-4	Ages 5-14	Total Ages 1-14
Asthma	2	1	3
Bacterial pneumonia	1	0	1
Dehydration, primary	2	4	6
Dehydration, secondary	1	1	2
Gastroenteritis	1	0	1
Other “preventable”	3	5	8
<b>Total “Preventable”</b>	<b>10</b>	<b>11</b>	<b>21</b>

Source: Preventable hospitalization file, data extracted from the Office of Health Care Information hospital inpatient database, Wisconsin Center for Health Statistics.

Note: “Preventable hospitalizations” include all hospitalizations for the 28 conditions that have been defined as “ambulatory-care-sensitive.” (See Technical Notes for ICD-9-CM codes and a description of the process for defining ambulatory-care-sensitive conditions.) Hospitalizations that occurred out-of-state are not included; see Technical Notes for a list of counties most affected.

Provision of timely and appropriate preventive and primary care can decrease hospitalizations for ambulatory-care-sensitive conditions by:

- preventing the onset of the condition;
- controlling an acute episodic illness or condition;
- managing the condition.

*Statewide, about 8,000 hospitalizations of children ages 1-14 in 1994 were “preventable” hospitalizations, that is, for conditions that can usually be managed by adequate preventive and primary care.*

**Table 9. “Preventable” Hospitalizations for Children Ages 1-14, Five-Year Average, 1990-1994**

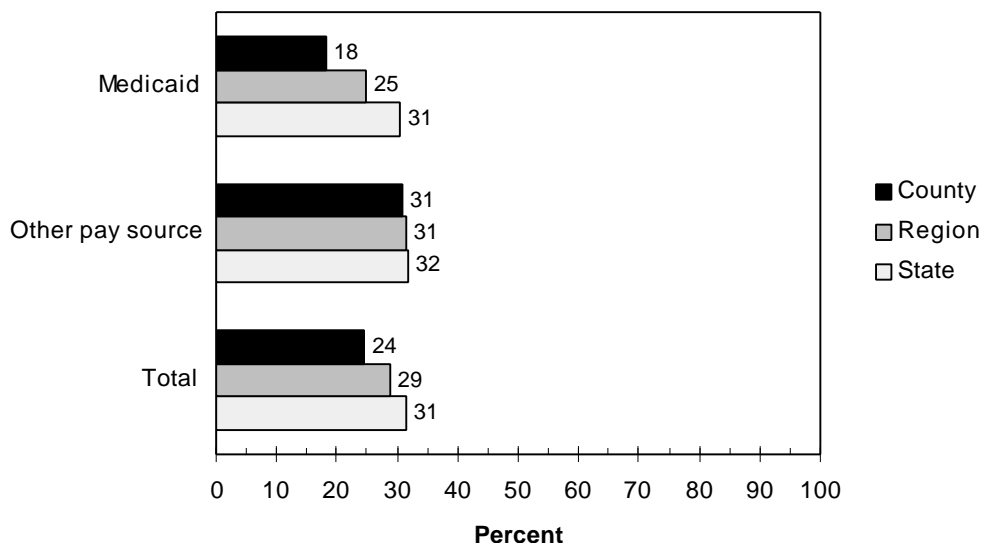
Age Groups	Average Annual Number	Rate		Your County Is:		
		County	State	Low	Medium	High
1-4	15	15.8	17.6		x	
5-14	14	5.2	5.4		x	
<b>Total “Preventable”</b>	<b>29</b>	<b>7.9</b>	<b>8.8</b>		<b>x</b>	

Source: Preventable hospitalization file, data extracted from the Office of Health Care Information hospital inpatient database, Wisconsin Center for Health Statistics.

Note: Rate is the number of “preventable” hospitalizations per 1,000 children in the age group. Hospitalizations that occurred out-of-state are not included; see Technical Notes for a list of counties most affected. The distribution of preventable hospitalization rates determines the county rank. A county is “low” if it is in the lowest quartile ( $\leq 14.3$  for age group 1-4;  $\leq 4.0$  for age group 5-14;  $\leq 6.8$  for age group 1-14), or “high” if it is in the highest quartile ( $\geq 22.0$  for age group 1-4;  $\geq 5.9$  for age group 5-14;  $\geq 9.9$  for age group 1-14).

*Statewide, “preventable” hospitalizations of children ages 1-14 averaged 8.8 per 1,000 children annually for the period 1990-1994.*

**Figure 12. "Preventable" Hospitalizations as a Percent of All Hospitalizations Among Children Ages 1-14, 1994**



*Statewide, the proportion of children's hospitalizations classified as "preventable" was similar among those billed to Medicaid (31 percent) and those billed to other payers (32 percent).*

Source: Preventable hospitalization file, data extracted from the Office of Health Care Information hospital inpatient database, Center for Health Statistics.

Note: Hospitalizations that occurred out-of-state are not included; see Technical Notes for a list of counties most affected and for hospitalizations by pay source and age of child.

**Table 10. Number and Total Charges for "Preventable" Hospitalizations by Source of Payment, Children 1-14, 1994**

"Preventable" Hospitalizations	Medicaid	Other Pay Source	Total
Total Number	8	13	21
Percent Emergency Room Admissions	25%	62%	48%
Total Hospital Charges (in thousands)	\$13.2	\$26.3	\$39.5

Source: Preventable hospitalization file, data extracted from the Office of Health Care Information hospital inpatient database, Wisconsin Center for Health Statistics.

Note: Hospitalizations that occurred out-of-state are not included; see Technical Notes for a list of counties most affected. Hospital charges exclude physician charges.

*Statewide in 1994, "preventable" hospitalizations accounted for more than \$25 million in hospital charges for children ages 1-14.*

**Table 11. Number of Hospitalizations for Leading Diagnoses, Children Ages 1-14, 1994**

Diagnosis at Discharge (ICD-9-CM Codes)	Ages 1-4	Ages 5-14	Total Ages 1-14
Psychiatric (295-302,306-316)	1	15	16
Injury (800-999)	3	8	11
Asthma (493)	2	1	3
Pneumonia (480-486)	2	0	2
Upper respiratory (460-466)	2	0	2
All other	21	31	52
<b>Total Hospitalizations</b>	<b>31</b>	<b>55</b>	<b>86</b>

Source: Office of Health Care Information, hospital inpatient database.

Note: "Leading diagnoses" are determined by statewide frequencies of first-listed/primary diagnoses for children 1-14.

Hospitalizations that occurred out-of-state are not included; see Technical Notes for a list of counties most affected.

*In 1994, psychiatric disorders, injuries and asthma were the leading diagnostic categories for hospitalizations of Wisconsin children overall and for those ages 5-14.*

## CHILD MORTALITY

**Table 12. Five-Year Average Child Mortality, 1990-94**

Age Group	Average Annual Number of Deaths	Average Mortality Rate Region	Average Mortality Rate State
1-4	0	32.1	38.3
5-14	0	21.2	21.3
<b>Total</b>	<b>0</b>	<b>24.1</b>	<b>26.0</b>

Source: 1990-94 death certificates, Wisconsin Center for Health Statistics.

Note: The mortality rates for the region and state are the number of deaths per 100,000 children in the age group. No rates by county are presented.

*Statewide, about 270 deaths among children ages 1-14 occurred annually from 1990 through 1994.*



## PROGRAM INFORMATION

**Table 13. Children in Selected Programs, 1994**

<b>Program</b>	<b>Ages</b>	<b>Number of Participants</b>
<b>Medicaid Total</b>	<b>1-4</b>	<b>175</b>
AFDC-Related		102
Healthy Start		68
SSI and Katie Beckett		5
<b>Medicaid Total</b>	<b>5-14</b>	<b>285</b>
AFDC-Related		203
Healthy Start		54
SSI and Katie Beckett		28
<b>WIC</b>	<b>1-4</b>	<b>172</b>
<b>Birth to Three</b>	<b>&lt;3</b>	<b>18</b>

Source: Bureau of Health Care Financing (Medicaid data); Bureau of Public Health (WIC data); Division of Community Services (Birth to Three data).

Note: Medicaid participant counts are point-in-time estimates that include all eligible children, both those receiving health care on a fee-for-service basis and those enrolled in HMOs (health maintenance organizations). Children may be eligible for Medicaid according to the following classifications:

- AFDC (Aid to Families with Dependent Children)
- Healthy Start - a Wisconsin program to extend health care coverage to pregnant women and young children with income levels up to 185 percent of poverty
- SSI (Supplemental Security Income) and Katie Beckett - two programs that assist children with serious disabilities.

WIC (the Special Supplemental Nutrition Program for Women, Infants and Children) participant data represent point-in-time counts for December, 1994. (See Technical Notes for WIC program services.)

The Birth to Three Program count is a cumulative total for the one-year period December 1, 1993 through November 30, 1994. Eligibility criteria include:

- Age less than three, and
- A diagnosed developmental disability, or
- A significant delay in one or more areas of development.

*Statewide, at any given time in 1994, about 82,000 children ages 1-4 and 128,000 children ages 5-14 were enrolled in Medicaid. About 65,000 children ages 1-4 received WIC services in 1994.*

**Table 14. Number of Children with Selected Fee-For-Service (FFS) Medicaid Services by Eligibility Status, 1994**

Service	AFDC-Related	Healthy Start	SSI & Katie Beckett	Total
<b>Eligible Children Ages 1-4 (FFS Only)</b>				
Cumulative total for year	205	149	8	299
Point-in-time estimate	102	68	5	176
Preventive Services				
Comprehensive HealthCheck	12	17	3	32
Any preventive health exam	43	35	3	81
<b>Eligible Children Ages 5-14 (FFS Only)</b>				
Cumulative total for year	362	125	35	449
Point-in-time estimate	203	54	27	284
Preventive Services				
Comprehensive HealthCheck	35	9	2	46
Any preventive health exam	42	15	3	60
Dental Service	110	24	9	143

Source: Bureau of Health Care Financing.

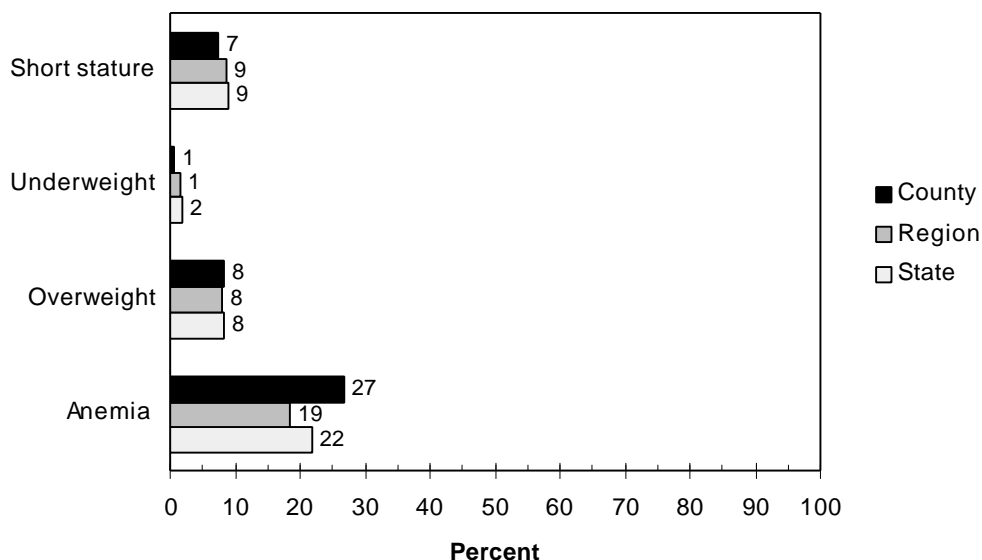
Note: The cumulative total represents an unadjusted count of children eligible for Medicaid on a fee-for-service basis in 1994, including those eligible only a portion of the year.

The point-in-time estimate is the cumulative total adjusted for duration of eligibility; this provides a "snapshot" of eligible children at any given time in 1994. The point-in-time counts in this table are not comparable to the data from Table 13 because Table 14 excludes children enrolled in Medicaid HMOs (health maintenance organizations) and includes children who became eligible retroactively.

The category "any preventive health exam" includes both HealthCheck and other comprehensive preventive examinations. (See Technical Notes.)

*The Wisconsin Medicaid program paid for nearly 21,000 HealthCheck examinations for children ages 1-4 and almost 15,000 examinations for children ages 5-14 on a fee-for-service basis in 1994.*

**Figure 13. Selected Nutritional Status Indicators for Children Ages 0-4 Enrolled in WIC, 1994**



*Statewide, children ages 0-4 enrolled in WIC during 1994 had various nutritional needs, including anemia (22 percent of enrollees).*

Source: CDC Pediatric Nutrition Surveillance System, 1994 Annual Summary for Wisconsin. Data based on reports from all Wisconsin clinics delivering WIC services (Special Supplemental Nutrition Program for Women, Infants and Children).

Note: "Short stature" is low height for age; "underweight" is low weight for height; "overweight" is high weight for height; "anemia" is a low value on a hemoglobin or hematocrit test. Low (or high) values are values below the 5th percentile (or above the 95th percentile) of a reference sample of U.S. children.

**Table 15. Number of Children with High Blood Lead Levels, 1995**

Number of children with high blood lead levels	39
High levels as a percent of all children screened	21%

Source: Bureau of Public Health.

Note: Data are for fiscal year ending June 30, 1995. "High" blood lead levels are defined as lead levels of 10 micrograms per deciliter or higher.

Number of children with high blood lead levels is based on reports from all testing sources; percent of children screened who have high levels is based on reports from the Milwaukee City Health Department Laboratory, the Racine City Health Department Laboratory, and the Wisconsin State Laboratory of Hygiene.

*Statewide, 21 percent of Wisconsin children who were tested for lead exposure had high blood lead levels.*

**Table 16. Reports of Child Abuse and Neglect, Children  
Ages 0-17, 1994**

Total reports	161
Reports per 1,000 children	33.2
Substantiated reports	71
Substantiated reports per 1,000 children	14.7
Percent of reports substantiated	44%

Source: Division of Children and Family Services, Department of Health and Family Services (*Annual Child Abuse and Neglect Report, 1994 Data*).

Note: "Substantiated" reports are those in which the investigating agency determines the child to be "in need of protective intervention or protective services, or there is an ongoing need for protective services among the principals in the report."

Cases not substantiated are designated either "unsubstantiated" or "not able to substantiate." (See Technical Notes for definitions.)

*Statewide, there were 14 substantiated reports of child abuse per 1,000 children in 1994.*

## Technical Notes

These technical notes supplement the information found below the tables and figures. More detailed technical notes can be found in the companion report, *Children's Health: Statewide Estimates*.

A dash (---) in a table cell and the absence of a bar in a figure indicate either that data are not available for a given geographic level, or that a stable estimate could not be calculated.

The Division of Health regions used in this report reflect the boundaries in 1994, the reference period for most of the data. These were superseded in July 1996 with a new set of uniform regional boundaries for the Department of Health and Family Services.

**U.S. Census.** Individuals and families are assigned poverty status based on the relationship of 1989 family income reported in the 1990 Census to poverty guidelines. The poverty level for a family of four was \$12,674 in 1989. The Census tape from which poverty information is derived includes only selected age and poverty groups, and is based on sample data.

Figure 2 shows the percent of children in poverty in 1989 for those racial/ethnic groups for which the 1990 U.S. Census count of children in a given area was at least 200. Figure 3 shows the percent of Wisconsin children who were living in poverty in 1989 according to family type (married-couple, male-headed or female-headed). The data in this figure are somewhat different from a similar figure in the *Children's Health* report (Figure 1), which shows the percent of *families* (rather than the percent of *children*) in each category.

**Family Health Survey.** The Wisconsin Family Health Survey (FHS) is a statewide telephone survey using a stratified random sample of households in Wisconsin. One person in each household, who is most knowledgeable about the health of household members, answers the questions on behalf of all household members. Interviews are conducted each month of the year; a total of about 2,400 households are surveyed annually. Completed interviews are weighted to represent nonrespondents and to correct for disproportionate sampling rates across strata. The completed sample is considered to be representative of the Wisconsin household population, although it does not include any households without telephones and minority populations are somewhat underrepresented.

**Sample size.** For most of the FHS analyses in this report, data from five years (1990-1994) were combined. This was done to provide more stable estimates at the county and regional levels for the relatively small age group being considered. The reader should be aware that the confidence associated with estimates in these reports varies with the size of the sample used to produce the estimates. For example, estimates based on a sample of 200 might vary by as much as (plus or minus) 6 percent. In these profiles, estimates are not available below the county level, and county estimates based on fewer than 200 interviews are suppressed. In two instances ("health

care coverage over the past year," and "dental sealants") reported estimates were based on less than five years of data. Estimates of children with dental sealants were based on fewer than 200 cases for all regions except the Southeastern. All estimates are rounded to the nearest whole percentage (estimates that are less than 0.5 are rounded to 0).

**Type of health care coverage.** FHS information on the type of health care coverage among children (see Figure 4) indicates that 10 percent of Wisconsin children aged 1-14 in the years 1990-1994 were covered by Medicaid (Medical Assistance). This is a lower percentage than that estimated by the Wisconsin Medicaid Program (20 percent in 1994). Part of the difference between these two percentages is attributable to the under-representation of households at the lowest income levels in the Family Health Survey sample.

**Provider Files.** The Physician Profile Survey permitted physicians to report up to three specialties. Table 6 of this report shows the number of physicians according to the first primary care specialty reported in the 1993 Physician Profile Survey. Survey questions used for Table 6 were: 1) "Do you provide pediatric care?" 2) "Do you serve Medical Assistance patients (MA, Medicaid, Title XIX, T19)?"

In Table 7 the location of practice was assigned using zip code information for advanced practice nurses because the Advanced Practice Nurse Profile Survey does not include county information.

**Hospitalizations.** The hospital findings presented in this report are based on data submitted to the Office of Health Care Information, extracted from each hospital's Uniform Billing Record (UB-82 or UB-92). Table 8 is based on all inpatient hospitalizations of Wisconsin residents in the age groups specified discharged in 1994. Unless otherwise noted, hospitalizations by cause reflect the first-listed diagnosis. Source of payment reflects the "expected" source of payment. "Expected" is defined as the person or organization to whom the bill is originally submitted. In some instances, this will not necessarily be the person or organization that pays the bill.

**"Preventable" hospitalizations.** In this report, the list of conditions defined as being associated with preventable hospitalizations is based on a study undertaken by the United Hospital Fund of New York. The study examined whether low-income residents of New York experienced higher rates of hospitalization from illnesses that are potentially avoidable with good ambulatory care. Twenty-eight diagnoses were defined as "ambulatory-care-sensitive" conditions by a medical panel associated with the New York study (the Ambulatory Care Access Project, John Billings, principal investigator). The ICD-9-CM codes for these conditions are as follows:

**Congenital syphilis** (secondary diagnosis for newborns only): 090. **Immunization preventable conditions** : 033, 390, 391, 037, 045, 320.0 (ages 1-5). **Grand mal status and other epileptic convulsions** : 345. **Convulsions "A"**: 780.3 (ages 0-5). **Convulsions "B"**: 780.3 (ages > 5). **Severe ear, nose and throat infections**: 382 (exclude cases with insertion of myringotomy tubes), 462, 463, 465, 472.1. **Pulmonary tuberculosis**: 011. **Other tuberculosis**: 012-018. **Chronic obstructive pulmonary disease**: 491, 492, 494, 496, 466.0 (only with secondary diagnosis of 491, 492, 494, 496). **Bacterial pneumonia** (exclude cases with secondary diagnosis of sickle cell anemia and patients less than 2 months old): 481, 482.2, 482.3, 482.9, 483, 485, 486. **Asthma**: 493. **Congestive heart failure** (exclude cases with pacemaker, angioplasty, transplant or bypass procedures): 428, 402.01, 402.11, 402.91, 518.4. **Hypertension** (exclude cases with pacemaker, angioplasty,

transplant or bypass procedures): 401.0, 401.9, 402.00, 402.10, 402.90. **Angina** (exclude cases with a surgical procedure): 411.1, 411.8, 413. **Cellulitis** (exclude cases with a surgical procedure, except if 86.0 (incision of skin and subcutaneous tissue) is the only listed procedure): 681-683, 686. **Skin grafts with cellulitis** (exclude admissions from SNF/ICF): DRG 263 and 264. **Diabetes A**: 250.1, 250.2, 250.3. **Diabetes B**: 250.8, 250.9. **Diabetes C**: 250.0. **Hypoglycemia**: 251.2. **Gastroenteritis**: 558.9. **Kidney/urinary infection**: 590, 599.0, 599.9. **Dehydration - volume depletion** (examine principal and secondary diagnoses separately): 276.5. **Iron deficiency anemia** (ages 0-5 only, examine principal and secondary diagnoses separately): 280.1, 280.8, 280.9. **Nutritional deficiencies** (examine principal and secondary diagnoses separately): 260-262, 268.0, 268.1. **Failure to thrive** (ages < 1 only): 783.4. **Pelvic inflammatory disease** (women only, exclude cases with a hysterectomy): 614. **Dental conditions**: 521-523, 525, 528.

For Table 9 in this report, hospitalization information for the years 1990-1994 was combined to permit calculation of comparable rates of "preventable" hospitalizations by county. Denominators for calculating average age-specific hospitalization rates for the five-year period 1990-1994 were obtained by averaging the number of children in the population in 1990 and in 1994.

In the analysis of hospitalization rates by county, no data were available for Wisconsin residents hospitalized in other states. Caution is therefore advised when analyzing hospitalization rates for residents of border counties. The counties most affected by this care pattern are: Ashland, Barron, Bayfield, Buffalo, Burnett, Douglas, Dunn, Florence, Grant, Iron, Marinette, Pepin, Pierce, Polk, St. Croix, and Washburn. It is possible that some of these counties would show higher rates of hospitalization if more complete data were available.

The proportions shown in Figure 12 are based on number of hospitalizations by pay source. In 1994, there were 9,561 hospitalizations among children ages 1-4; 47 percent were billed to Medicaid and 53 percent to other pay sources. Among children ages 5-14, there were 16,108 total hospitalizations; 39 percent were billed to Medicaid and 61 percent to other pay sources.

**Mortality.** Denominators for calculating average five-year mortality rates reported in Table 12 were obtained by averaging the number of children in the population in 1990 and in 1994.

**Program Information.** Most of the information in this section is based on counts of children receiving services in specific programs, including the Medicaid Program, Birth to Three Program, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The statistics presented refer to children in the respective program only, and are not representative of the total population of children in the state.

***Birth to Three.*** Counts of children enrolled in the Birth to Three program in Table 13 are not available below the county level.

***Medicaid information.*** Table 14 shows the number of children with fee-for-service Medicaid by three eligibility categories: AFDC-related, Healthy Start, and SSI/Katie Beckett. The "cumulative total for year" is a unique recipient count within any of these eligibility categories; however, since in a given year a person may become eligible for Medicaid through more than one program, the row total may be less than the sum of the three eligibility categories. For example, a child who became eligible for Medicaid through Healthy Start at the beginning of the year, and who later became eligible through AFDC, would be counted in both these categories but only once

in the row total. The “point-in-time” estimate is adjusted for duration of eligibility and shows a “snapshot” of eligible children at any given time in 1994. Table 13 also provides “point-in-time” estimates by eligibility categories but is not comparable to the data from Table 14 because Table 13 includes children enrolled in Medicaid HMOs (health maintenance organizations) and Table 14 includes children who became eligible retroactively. In a handful of cases, counts at the city level were higher than counts at the corresponding county level because of discrepant city and county (ascertained from the zip code) information on the Medicaid records. When this occurred, the number reported for the balance of county was zero.

In the Medicaid data shown in Table 14, “Any preventive health exam” includes both HealthCheck (MA code W7000) and preventive medicine services (CPT-4 codes 99381-99384, 99391-99394), which comprise both initial and periodic “evaluation and management of an individual including a comprehensive history, a comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, and the ordering of appropriate laboratory/diagnostic procedures” (*Current Procedural Terminology*, 1996 edition, American Medical Association).

**WIC.** The nutritional status indicators in Figure 13 are from the 1994 Pediatric Nutrition Surveillance System (PedNSS) data for Wisconsin. The data for Wisconsin are limited to information for children under five years of age enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). WIC provides nutrition education, supplemental foods, and health and social service referrals for pregnant, breastfeeding and postpartum women, infants and young children. Data are based on reports from all Wisconsin clinics delivering WIC services. Data from Indian reservation clinics were excluded from county estimates as these clinics may serve multiple counties. Except for the cities of Milwaukee, Madison, and Racine, data are not available below the county level.

**Lead program information.** Table 15 information about Wisconsin children with elevated blood lead levels (10 micrograms per deciliter or higher) is collected by the Childhood Lead Poisoning Prevention Program in the Bureau of Public Health, Division of Health.

**Child abuse and neglect.** The reports of child abuse and neglect presented in Table 16 are not available below the county level. Reports actually are a count of children suspected of being abused or neglected. A child abuse case which is documented on a child abuse form may include more than one abuse victim. Reports are a count of the children reported, not the number of forms received. A case is designated “unsubstantiated” when a child or other principals of the report are not in need of protective intervention or protective services. A case is designated “not able to substantiate” when critical information necessary to finalize a determination cannot be obtained.